Research has proved that adverse living conditions to which the human body is exposed in the most critical moments of life, i.e. in fetal development and in childhood, have negative health outcomes in adulthood. Thus, they decreased/weakened some kind of biological attractiveness (e.g. high chance for giving birth to healthy children) and/or social attractiveness (e.g. a chance for social advancement). Therefore they could weaken social mobility, understood as an intergenerational change in socio-economic status (social attainment), which an individual would experience through marriage or through occupational advancement (occupational/ military career).

The main aim of the project is to investigate the long-term social consequences of adverse conditions experienced in early life (prenatal and early-child development) by society in historical times. The following questions call for research: whether and to what extent did the extreme conditions occurring in early life influence intergenerational mobility? Whether and to what extent did they limit the chances of social mobility/ social advancement through marriage, occupational and military career?

The goal will be achieved with the use of a model population, represented by the population of Poznań residents from the 1840s to the end of the 19th century. Poznań society in the proposed period for study meets the requirements for the implementation of the main project's objective, i.e. it was varied in terms of denomination, social and economic strata, and underwent political, economic and social changes at that time. The project is interdisciplinary in nature, making use of methods from historical demography, economic history and human population biology. Various historical sources will be used in the project: parish registers, Prussian statistics, narrative sources (diaries, letters), consistory, the Poznan City File (Akta Miasta Poznania), etc. The analysis will be based on the reconstructed histories of individuals from birth to marriage and/ or death, which will allow to capture the social changes occurring in their life through marriage and/or acquired profession. Socioeconomic status (SES) of an individual at birth and in adulthood will be reconstructed. Intergenerational changes in social status between parents and their adult children will be compared. The most critical stages of early life development, encompassing fetal and early childhood period, will be estimated. To reconstruct the living conditions in early life, local economic and demographic rates will be assigned to this period: prices and consumption of potato and meat (as proxies for the level of nutrition during fetal and early childhood period), the level of unemployment and mortality of infants and children up to 5 (as proxies for the stress level in family/ society). The results of the project take into consideration the context of political, social and economic changes in Poznań between the 1840s to the end of the 19th century. Special attention will be paid to the following events from the history of the city: the Poznań Uprising (1848), religious riots (1845), famine (1847), craftsmen's strike (1869), epidemics, great

The research results will be an important step in understanding a relationship between social costs in adulthood and adverse conditions in the earliest stages of life. With the use of data at individual/ family level, the processes occurring at the population level will be explained. The findings from the project will enrich current explanations of SES inequalities and social disparities in adulthood linking them with the earliest stages of human life. The project will change the perception of social changes by adding a biological context at the individual/family level. So far, social changes have usually been associated with political and economic events. The project will result in a PhD dissertation on how extreme conditions spanning from the prenatal period through the early childhood influenced later in time social mobility of 19th-century Poznań society. The project will also be the first approach in the Polish research to use international standardised tools to describe SES. In the long-term perspective it will allow comparing changes in Polish 19th-century society to societies across different regions of Europe from the same period.